

Supplemental Poverty Measure: Measuring the Impact of Programs and Policies at the State Level Using the American Community Survey

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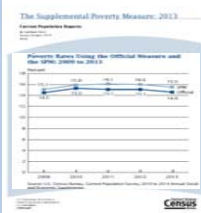
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What is the Supplemental Poverty Measure (SPM)?

Observations from the Interagency Technical Working Group - March 2, 2010.

- Based on 1995 National Academy of Sciences panel recommendations.
- Will not replace the official poverty measure.
- Will not be used for resource allocation or program eligibility.
- Census Bureau and BLS responsible for improving and updating the measure.

4th Census Report by Kathleen Short released, October 16, 2014



How does the SPM Differ from the Official Poverty Measure?

	Official Poverty Measure	Supplemental Poverty Measure
Thresholds	48 thresholds by age, head, size of family and number of children. Derived from USDA food budgets.	Derived from latest five years of CE data on spending on food, clothing, shelter, and utilities. Adjusted for tenure and geography.
Resources	Cash income before taxes.	Cash income before taxes PLUS noncash benefits and tax credits MINUS taxes and necessary expenditures.
Unit of Analysis	Related by blood, marriage, or adoption. Universe excludes unrelated children under age 15.	Resource unit includes cohabiting partners, their relatives, and unrelated children under age 15.

Why Use the American Community Survey (ACS) to Estimate the SPM?

- Current Population Survey Annual Social and Economic Supplement (CPS ASEC) sample not large enough for
- Single year state level poverty estimate
 - Sub-state poverty estimates, e.g., metro area
- Researchers across country using the ACS to estimate SPM-like measures
- New York City, Wisconsin, California, Virginia, Massachusetts, Georgia, and Illinois
 - Interest in production of comparable estimates
 - Facilitate estimates for jurisdictions not able to fund their own research operations

Estimating the SPM Using the ACS

Step One – Data Harmonization
Harmonize the necessary variables in the CPS ASEC (2011, 2012, 2013) and the American Community Survey (2011).

Step Two – Unit of Analysis
Combine cohabiting partners with household reference persons. Create unrelated subfamilies by imputing relationships.

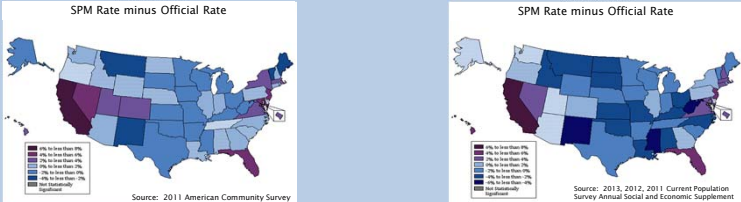
Step Three – Resource Measure
Use logistic models, predicted means match and administrative data to impute whether benefit was received or expense was paid and amounts. The models use the CPS ASEC as the donor file for the logistic models and the predicted mean match.

Step Four – Tax Model
Estimate federal and state income tax payments and credits and payroll taxes using the Census Bureau tax model.

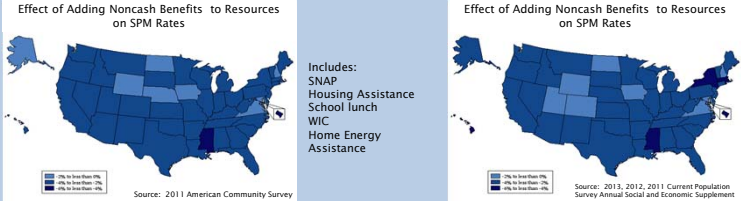
Step Five – Geographic Adjustments
Adjust housing portion of SPM thresholds using index of median rents by Public Use Microdata Area (PUMA).

NONCASH Benefits or Necessary Expenditures	CPS ASEC		ACS	
	Yes/No	Amount	Yes/No	Amount
SNAP – Supplemental Nutrition Assistance Program	Survey	Survey	Survey	Predicted Means Match
WIC – Women, Infants and Children Nutrition Program	Survey	Admin	Logistic	Admin
Regular School Lunch	Survey	Admin	Logistic	Admin
Free or Reduced Price School Lunch	Survey	Admin	Logistic	Admin
Housing Assistance	Survey	Admin	Logistic	Admin
LHEAP – Low Income Home Energy Assistance Program	Survey	Survey	Logistic	Predicted Means Match
Taxes	Model	Model	Model	Model
Child Care	Survey	Survey	Logistic	Predicted Means Match
Medical Out-of-Pocket (MOOP)	Survey	Survey	Logistic	Predicted Means Match
Child Support Paid	Survey	Survey	N/A	N/A

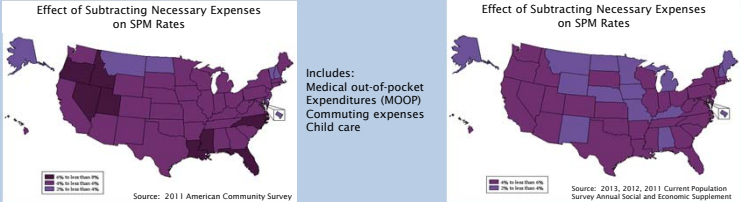
How do State Poverty Rates Using the SPM Compare to the Official Poverty Rates?



How Much do Noncash Benefits Decrease SPM Rates?

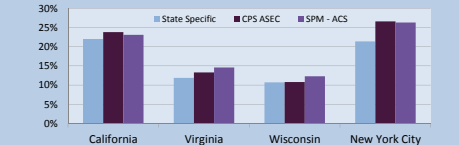


How Much do Necessary Expenses Increase SPM Rates?



Comparing ACS Estimates to CPS ASEC and State Specific

Researchers in California, Virginia, Wisconsin and New York City have created their own SPM-like measures. The following chart compares these ACS estimates to the CPS estimates and these state-specific estimates for 2011.



Sources: The Stanford Center on Poverty and Inequality, the Weldon Cooper Center for Public Service, University of Virginia, Institute for Research on Poverty and the NYC Center for Economic Opportunity

Conclusions

Official vs SPM Rates

- At the state level, the difference between the official poverty rate and the SPM rate in the ACS ranged from 6.2 percentage points higher (California) to 3.6 percentage points lower (Vermont).¹ In the CPS ASEC the range was 7.3 percentage points (California) to 4.6 percentage points lower (Mississippi).²
- The differences in the difference between the official poverty rate and the SPM rate from the CPS ASEC and ACS were not statistically significant for 25 states and the District of Columbia.

Effect of Noncash Benefits

- The effect of noncash benefits on SPM rates in the ACS ranged from 5.9 percentage points in the District of Columbia to 1.1 percentage points in Wyoming.³
- In 41 states and the District of Columbia, the differences in the effect of noncash benefits between the ACS and the CPS ASEC were not statistically significant.

Effect of Necessary Expenses

- The increase in SPM rates due to the subtraction of necessary expenses in the ACS ranged from 2.4 percentage points (Vermont) to 7.0 percentage points (Nevada).⁴
- The differences in the effect of necessary expenses between the ACS and the CPS ASEC were not statistically significant in 30 states and the District of Columbia.

1. The difference in the ACS between the SPM and the official poverty rates for Vermont were not statistically different from the differences for Montana, Maine, and New Mexico.
2. The difference in the CPS between the official and the SPM rates for California, Louisiana, Maine, South Dakota, Kentucky, New Mexico, and West Virginia were not statistically different from the difference for Mississippi.
3. Effect of noncash benefits on SPM rates for New Hampshire, Nebraska, and North Dakota were not statistically different from the effect for Wyoming.
4. The increase for Alaska was not statistically different than the increase for Vermont. The difference in the increase for Nevada and the increase for Mississippi, Louisiana, Oregon, and Utah were not statistically significant.

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